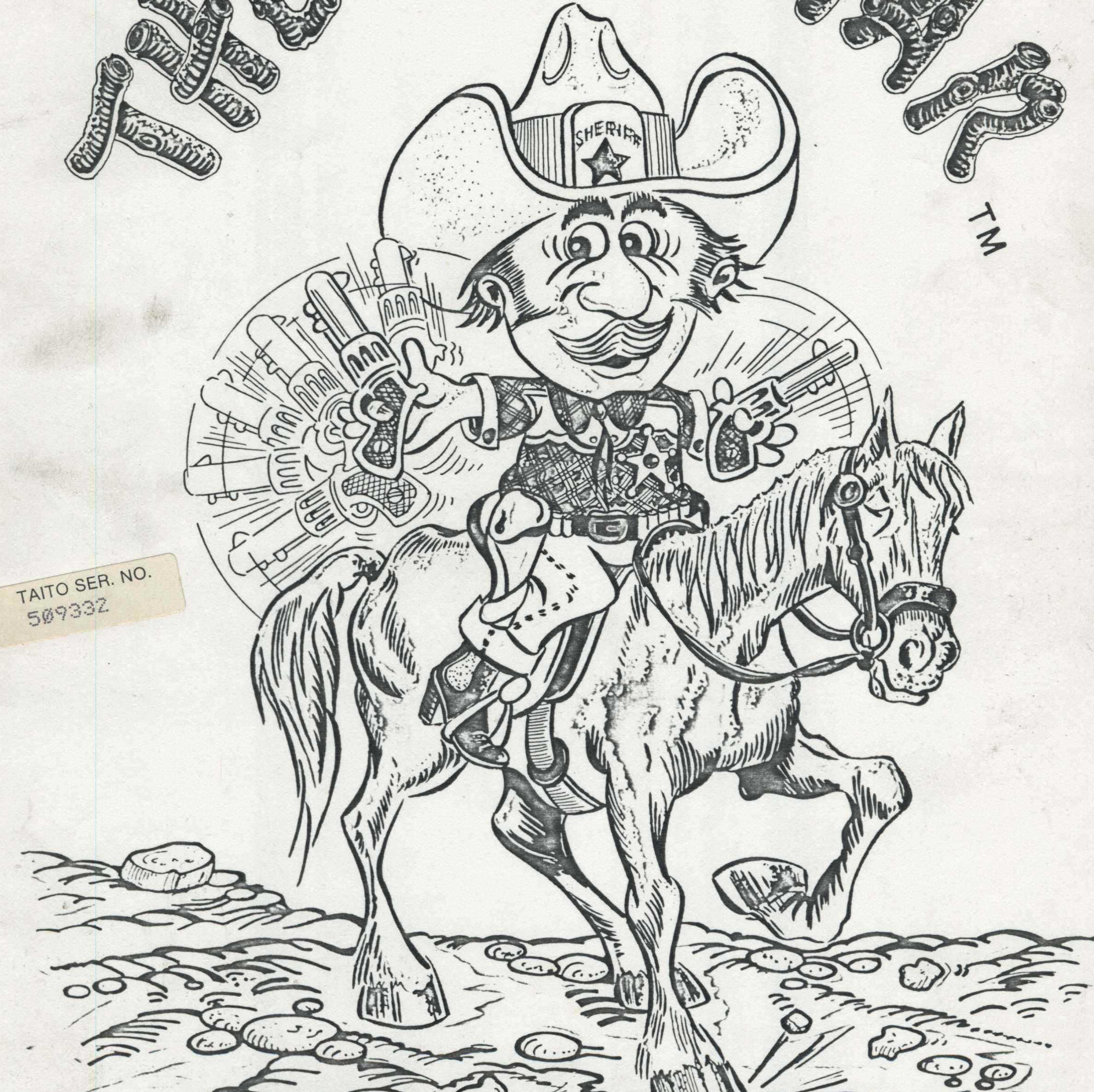
Deluxe - P.S

# THE TIN STAR™




TAITO SER. NO.
5Ø9332

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This manual will guide you in the conversion of your raster scan, color monitor upright video game into a THE TIN STAR game. We urge you to read through the instructions and study the drawings before beginning the conversion.

Perform the instruction steps in the order presented.

1. Check the parts supplied in this kit against the parts list included in this manual.

2. Cabinet preparation.

   a. Remove all logic boards and power supplies from cabinet.

   b. Remove all cabling between logic board(s), power supply, control panel, speaker(s), monitor and the coin door. Leave cabling for on/off switches and/or interlock intact.

   c. THE TIN STAR requires a horizontally mounted monitor. The monitor must also be able to support a 42us active video signal. Some adjusts to the monitor, especially the horizontal frequency, may have to be made after the conversion is complete.

3. Install Power supply and line filter.

In order to insure FCC requirements are met, the following steps should be taken when installing this kit using a non-Taito power supply.

a. A power line filter must be installed between the power supply and the AC line. A recommended filter is a Corcom model #F2795.

b. A single point ground should be maintained throughout the game. in other words, all grounding straps included with the kit should be connected to the green "earth ground" wire in the line cord.

c. The voltage and current requirements for the power supply are:

+5 Volts @ 6 Amps

+12 Volts @ 1 Amp

4. Install Ground Plate PCB Assembly.

The Ground Plate Assembly consists of a wood base with ground plate, logic boards, plastic RF shield, filter board and PC board mounting brackets.

a. Remove eleven (11) speed nuts and the plastic RFI Shield. The speed nuts are removed by squeezing the tabs and sliding off. Save the speed nuts and RFI Shield for later use.

b. Determine the best location for the Ground Plate assembly leaving enough room to install and connect the main harness. Mark the locations of the four (4) mounting holes and drill 1/4 inch thru holes at these locations. See FIGURE 1 for a typical application.

f. Mount the Ground Plate Assembly into place with four (4) #10 carriage bolts and wing nuts. The carriage bolt heads should be on the outside of the cabinet. See FIGURE 1 for a typical application.

5. Connect the main harness.

a. Connect the main harness to the filter board. The cable connectors are marked with numbers that correspond to numbers marked on the filter board.

b. Connect the two (2) power cables from the harness to the power supply. These cables are marked J3 and J4, they connect to the corresponding J3 and J4 connectors on the power supply.

c. Connect the gray video cable to the monitor. The connectors supplied will mate with most Wells Gardner and Electrohome monitors. Refer to the wiring diagram signal definitions for different monitor applications.

d. Route the main harness up to the front of the game. See FIGURE 1.

e. Secure the main harness using the cable clamps and wood screws supplied with the kit.

f. Connect the speaker cable to the filter board at connector J2. Route the cable up to the speaker and cut to length. Strip both ends and solder the orange wire to the positive (+) tab on the speaker and the black wire to the negative (-).

6. Modify coin door cable.

   a. Cut the connector off the exsisting coin door cable.

   b. Install the 12-pin molex connector and wire as shown in FIGURE 2. If coin counters are not available, be sure the counter signal line are pulled up to 12VDC thru 47 ohm 1/2 watt resistors. If one counter is desired, connector the coin switches in parallel and both counter signals to the counter.

   c. Plug the coin door cable into the main harness connector R15.

7. Rework control panel.

   This kit supplies all the necessary parts needed to wire a control panel for THE TIN STAR. The ideal THE TIN STAR control panel has the joystick located on the left side of the panel, the rotary control on the right side and the jump button near the rotary control. The actual location of these components is left to the discretion of the technician.

   a. Strip the control panel of all buttons and and/or joysticks.

   b. Locate and drill the holes needed for the joystick, rotary control and buttons. Use templates supplied with kit to locate holes. Clean any burs from around holes. Use FIGURE 4 as a hole template for the joystick and rotary control.

   c. Remove any soil and/or grime from the front ot the panel.

   d. Cut the black lexan to the approximate size needed to cover the panel. If possible, leave enough lexan to wrap a small lip around the top and bottom of the panel.

   e. Peel the backing off the lexan and apply it to the control panel. Cut the lexan out from the holes on the panel.

   f. Install the rotary control on the control panel using the four #10-24 nuts, bolts, washers and stand-offs supplied. The stand-offs mount underneath the control panel between the the bottom of the panel and the rotary control.

   g. Install the rest of the player controls and any hardware that might have been removed on the panel.

   h. Install the control panel cable. Be carefull not to break any tabs off the switches. Use FIGURE 3 as a guide.

   i. Mount the control panel on the cabinet and connect it to the main harness cable R16. NOTE: The main harness control panel connector is a 15 pin connector.

8. Install marquee overlay.

   a. Remove marquee and clean soil and grime off.

   b. Cut the marquee overlay to approximately the size needed.

   c. Peel the backing off the overlay and apply the overlay to the marquee. Trim excess overlay off with a sharp knife or razor blade.

   d. Replace the marquee back on the cabinet.

9. Install Ground Braids.

   a. Connect a 28 inch ground braid to the Ground Plate at a convenient location, as long its in an area the RFI shield will cover, with a wood screw. Connect the other end of the ground braid to a power supply circuit board mounting screw. Scrape any green solder mask from the hole pad on the power supply circuit board before assembly. Tie any excess cable out of the way as to prevent a short circuit. SEE FIGURE 1 for a typical application.

   b. Connect a 28 inch ground braid from the power supply PC board mounting screw to a convenient chassis screw on the monitor. Scrape any green solder mask from the mounting hole pad before assembly. See FIGURE 1 for a typical application.

   c. Connect the 9 inch ground braid from the power cord filter box to a power supply PC board mounting screw. Scrape any green solder mask from the mounting hole pad before assembly. See FIGURE 1 for a typical application.

10. Game Adjustments.

   a. Consult the THE TIN STAR Manual and adjust the DIP switches as desired. Attach the Dip Switch setting card to the back door of the game for a handy reference.

   b. Turn the game on and wait for a image to appear on the screen. Adjust the monitor accordingly to get a sharp, centered display.

   c. Test the coin switches and counter if connected. Test the service switch also, this switch will increment the credits but not increment the coin counter, if used. If the coin lockouts were connected, check if they are "pulled in". They should release (or not allow coins to pass through) after nine (9) credits.

   d. Play a "2-PLAYER" test game. Test all player controls and push button switches. Adjust the volume controls as desired.

8. Install marquee overlay.

a. Remove marquee and clean soil and grime off.

b. Cut the marquee overlay to approximately the size needed.

c. Peel the backing off the overlay and apply the overlay to the marquee. Trim excess overlay off with a sharp knife or razor blade.

d. Replace the marquee back on the cabinet.

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d. Play a "2-PLAYER" test game. Test all player controls and push button switches. Adjust the volume controls as desired.

11. Install Plastic RFI Shield.

a. Carefully fit the shield over the board set. Check that the PC Board Harness does not push against the shield and that the wires on the lower portion of the filter board do not protrude under or push against the shield. Insure that the ground braid to the power supply lies flat between the shield and ground plate.

b. Secure the shield with eleven (11) speed nuts. Install the speed nuts carefully. The RFI Shield must be held FIRMLY against the Ground Plate to prevent radio frequency noise emission. Each speed nut is installed by squeezing the tabs and slipping down on the stud. Push the nut down firmly before releasing the tabs. Where space permits turn each nut until it is tight. NOTE: The volume controls are accessible from a hole in the underside of the shield.

c. Close and lock the rear service door and the coin door.

12. Attach FCC Compliance Label.

Affix the new self-adhesive FCC Compliance label OVER the original label on the rear of the cabinet.

13. Attach the FBI Warning label.

Affix the self-adhesive FBI label on the outside of the rear door near the top in the center.

The conversion is complete.

## CONVERSION KIT

| DESCRIPTION | QUANTITY | PART NUMBER |
| --- | --- | --- |
| PCB Assembly | 1 | 07-00354-001 |
| Control panel assy | 1 | 07-00355-001 |
| Main Harness | 1 | 09-00227-001 |
| Marquee overlay | 1 | 66-00016-001 |
| Control panel overlay | 1 | 66-00005-001 |

## HARDWARE PACK

| DESCRIPTION | QUANTITY | PART NUMBER |
| --- | --- | --- |
| Connector 12 pin | 1 | 25-00009-012 |
| Connector pins | 10 | 25-00007-001 |
| #10 X 24 bolt 1 3/4" | 4 | 51-03004-016 |
| #10 X 24 wing nut | 4 | 54-04004-001 |
| #10 X 24 Washer | 12 | 55-01004-010 |
| #6 X 1.00 Screw | 2 | 51-01012-011 |
| #8 X 1/2 Screw | 9 | 51-01043-006 |
| #10 X 1 1/4 Screw | 4 | 51-01024-013 |
| Cable clamp 3/8" | 2 | 59-00004-005 |
| Cable clamp 7/8" | 2 | 59-00004-013 |
| Speaker cable | 1 | 09-00288-001 |
| Resistor 47 ohm 1/2W | 2 | 11-10001-470 |
| Braided Cable, 9" | 1 | 09-00260-001 |
| Braided Cable, 28" | 2 | 09-00260-003 |

## MANUAL PACK

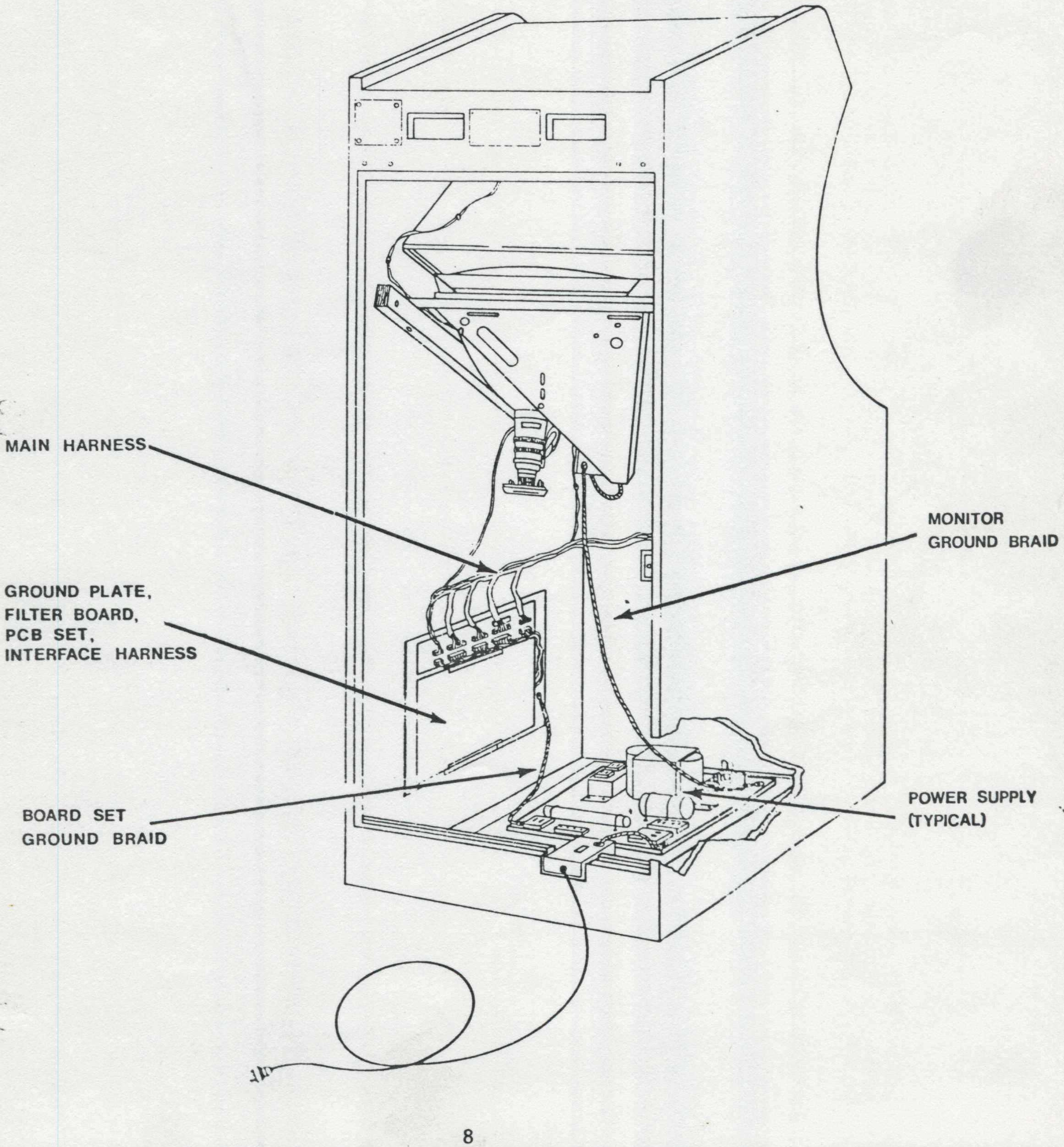
| DESCRIPTION | QUANTITY | PART NUMBER |
|---|---|---|
| Switch Setting Card | 1 | 79-00097-001 |
| Game Manual | 1 | 72-00047-001 |
| Instruction card | 1 | 79-50039-001 |
| Conversion Manual | 1 | 72-10023-001 |
| FCC Generic Compliance Label | 1 | 79-00070-001 |
| FBI Warning label | 1 | 79-00074-001 |

## CONTROL PANEL PACK

| DESCRIPTION | QUANTITY | PART NUMBER |
|---|---|---|
| Rotary control | 1 | 07-00136-001 |
| #10-24 x 1 1/4" carr. bolt | 4 | 51-03004-013 |
| #10-24 x 5/8" carr. bolt | 4 | 51-03004-008 |
| Keps nut #10-24 | 8 | 54-02004-001 |
| Washer #10x1/2" | 4 | 55-01004-001 |
| Inlay, control knob | 1 | 61-00244-001 |
| Cable, control panel | 1 | 09-00228-001 |
| Push button JUMP | 1 | 63-00156-002 |
| Push button 1 PLAYER | 1 | 63-00176-001 |
| Push button 2 PLAYER | 1 | 63-00176-002 |
| P.B. Switch | 3 | 29-00020-001 |
| Stamped nut | 3 | 54-07001-008 |
| Ball and Shaft | 1 | 63-00031-001 |
| Mask | 1 | 63-00033-001 |
| E ring | 1 | 59-00020-017 |
| 8 way leaf switch | 1 | 63-00032-006 |
| 8 way actuator | 1 | 63-00030-001 |

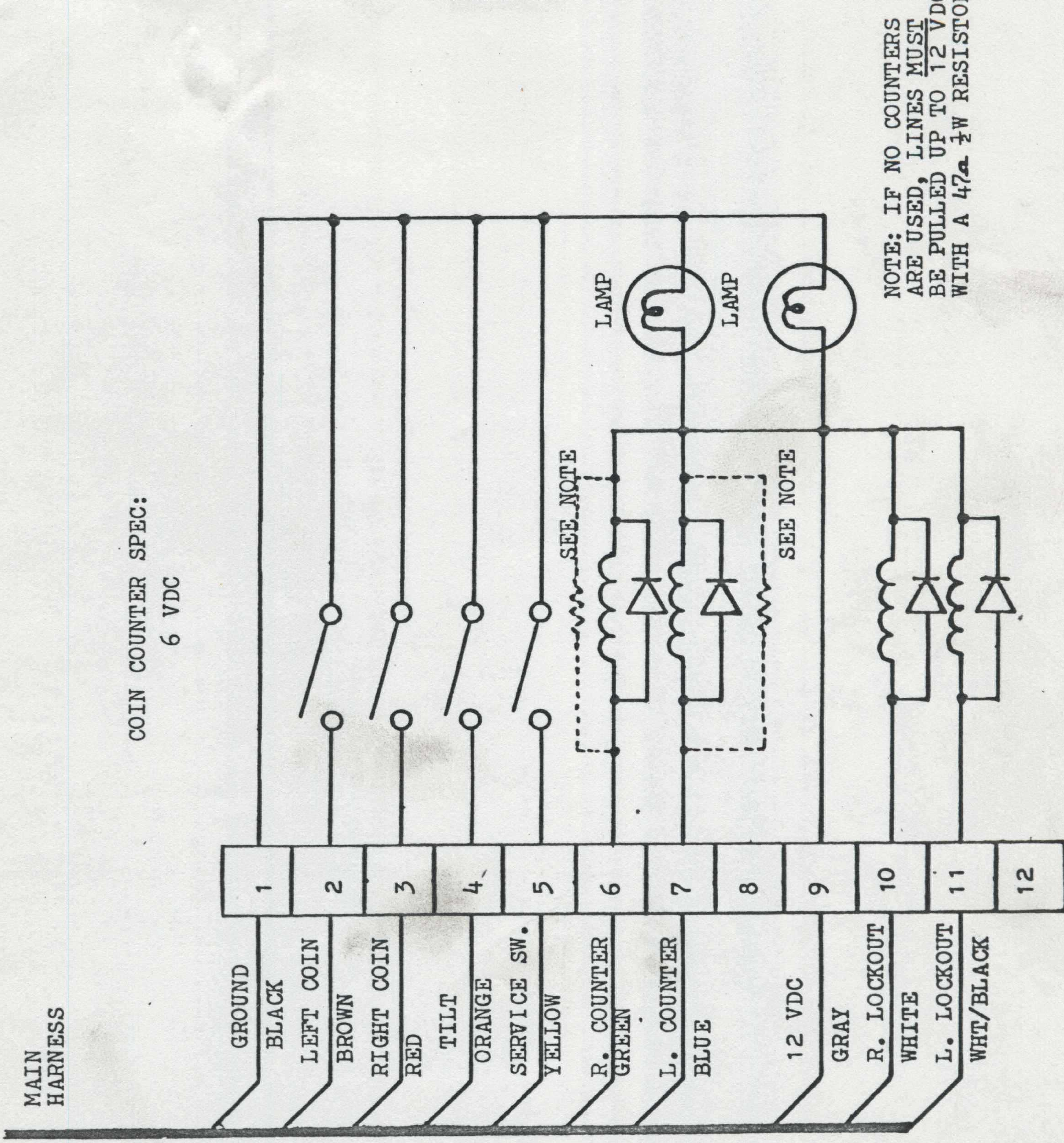
# TYPICAL INSTALLATION

FIGURE 1



# TYPICAL COIN DOOR WIRING

## FIGURE 2



# CONTROL PANEL WIRING

## FIGURE 3

